

WE CLAIM:

1. A method for the preparation of a powdered poly 2-hydroxyethyl methacrylate substantially in the absence of a chain transfer agent comprising:
  - 5 introducing monomeric 2-hydroxyethyl methacrylate containing ethylene glycol dimethacrylate impurities of at least 0.05% by weight of the monomer into water;
  - polymerizing the 2-hydroxyethyl methacrylate to form a polymerization mixture;
  - 10 drying said polymerization mixture; and
  - forming a powder from said dried polymerization mixture.
2. The method of claim 1, wherein the monomeric 2-hydroxyethyl methacrylate contains ethylene glycol dimethacrylate impurities in the range of about 0.05 to  
15 about 0.1% by weight of the monomer.
3. The method of claim 1, wherein the monomeric 2-hydroxyethyl methacrylate contains impurities in a total amount of no more than about 3% by weight of the monomer, and wherein the impurities are selected from the group consisting of  
20 ethylene glycol dimethacrylate, diethylene glycol monomethacrylate, methacrylic acid and mixtures thereof.
4. The method of claim 1, comprising introducing monomeric 2-hydroxyethyl methacrylate containing ethylene glycol dimethacrylate impurities of at least 0.05%  
25 by weight of the monomer, an initiator, and an activator into water, wherein the amount of each of the initiator and activator is in the range of about 0.1 to about 1.6%, based on the weight of the monomer.
5. The method of claim 1, further comprising blending the powder with a  
30 polyalkylene glycol to prepare a hydrophilic pressure sensitive adhesive.

6. The method of claim 5, wherein the polyalkylene glycol is selected from the group consisting of polyethylene glycol, polypropylene glycol and copolymers of ethylene glycol and propylene glycol, and mixtures thereof.

5 7. The method of claim 5, wherein the ratio of powder to polyalkylene glycol in is the range of about 1:1 to about 1:3.

8. The method of claim 2, wherein the monomeric 2-hydroxyethyl methacrylate contains impurities in a total amount of no more than about 3% by weight of the  
10 monomer, and wherein the impurities are selected from the group consisting of ethylene glycol dimethacrylate, diethylene glycol monomethacrylate, methacrylic acid and mixtures thereof.

9. The method of claim 2, comprising introducing monomeric 2-hydroxyethyl  
15 methacrylate containing ethylene glycol dimethacrylate impurities in the range of about 0.05 to about 0.1% by weight of the monomer, an initiator, and an activator into water, wherein the amount of each of the initiator and activator is in the range of about 0.1 to about 1.6%, based on the weight of the monomer.

20 10. The method of claim 2, further comprising blending the powder with a polyalkylene glycol to prepare a hydrophilic pressure sensitive adhesive.

11. The method of claim 10, wherein the polyalkylene glycol is selected from the group consisting of polyethylene glycol, polypropylene glycol and copolymers of  
25 ethylene glycol and propylene glycol, and mixtures thereof.

12. The method of claim 10, wherein the ratio of powder to polyalkylene glycol in is the range of about 1:1 to about 1:3.

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13. The method of claim 1, wherein the monomeric 2-hydroxyethyl methacrylate introduced into the water includes a blend of monomeric 2-hydroxyethyl methacrylate containing ethylene glycol dimethacrylate impurities in the range of about 0.05 to about 0.1% by weight of the monomer and monomeric 2-hydroxyethyl methacrylate containing ethylene glycol dimethacrylate impurities in an amount greater than about 0.15% by weight of the monomer.

14. The method of claim 13, wherein the monomeric 2-hydroxyethyl methacrylate contains impurities in a total amount of no more than about 3% by weight of the monomer, and wherein the impurities are selected from the group consisting of ethylene glycol dimethacrylate, diethylene glycol monomethacrylate, methacrylic acid and mixtures thereof.

15. The method of claim 13, comprising introducing monomeric 2-hydroxyethyl methacrylate containing ethylene glycol dimethacrylate impurities in the range of about 0.05 to about 0.1% by weight of the monomer, monomeric 2-hydroxyethyl methacrylate containing ethylene glycol dimethacrylate impurities in an amount greater than about 0.15% by weight of the monomer, an initiator, and an activator into water, wherein the amount of each of the initiator and activator is in the range of about 0.1 to about 1.6%, based on the weight of the monomer.

16. The method of claim 13, further comprising blending the powder with a polyalkylene glycol to prepare a hydrophilic pressure sensitive adhesive.

17. The method of claim 16, wherein the polyalkylene glycol is selected from the group consisting of polyethylene glycol, polypropylene glycol and copolymers of ethylene glycol and propylene glycol, and mixtures thereof.

18. The method of claim 16, wherein the ratio of powder to polyalkylene glycol in is the range of about 1:1 to about 1:3.

19. A hydrophilic pressure sensitive adhesive prepared by the method of claim 5.

20. A hydrophilic pressure sensitive adhesive prepared by the method of claim 10.

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21. A hydrophilic pressure sensitive adhesive prepared by the method of claim 16.

22. A cosmetic composition or skin care composition containing the powder prepared by the method of claim 1.

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23. A cosmetic composition or skin care composition containing the powder prepared by the method of claim 16.

24. A method of coating a substrate comprising applying the hydrophilic pressure sensitive adhesive prepared by the method of claim 5 to the substrate.

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25. A method of coating a substrate comprising applying the hydrophilic pressure sensitive adhesive prepared by the method of claim 10 to the substrate.

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26. A method of coating a substrate comprising applying the hydrophilic pressure sensitive adhesive prepared by the method of claim 16 to the substrate.

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